

Claims

[c1] What is claimed is:

1. An optical disc drive with a disc-position sensing device, the optical disc drive comprising:
a disc slot for a disc to be inserted into;
a roller for conveying the disc inserted into the disc slot;
and
the disc-position sensing device comprising a plurality of sensing modules installed inside the disc slot for sensing a position where the disc is inserted into the disc slot;
wherein the roller conveys the disc when all of the sensing modules have sensed the disc.

[c2] 2. The optical disc drive of claim 1, wherein the disc-position sensing device comprises two sensing modules.

[c3] 3. The optical disc drive of claim 2, wherein either of the sensing modules comprises a light source for emitting light and a light sensor for sensing the light emitted from the light source, and the roller conveys the disc when both of the light sensors do not sense the light from their corresponding light sources.

- [c4] 4. The optical disc drive of claim 2, wherein the sensing modules are installed to have a distance between them corresponding to a size of the disc, so that either of the sensing modules cannot sense the disc unless the disc is inserted into a middle region of the disc slot.
- [c5] 5. The optical disc drive of claim 2, wherein one of the sensing modules is installed on one side of the center of the disc slot, and the other one of the sensing modules is installed on the other side of the center of the disc slot.
- [c6] 6. The optical disc drive of claim 2, wherein the disc slot comprises a middle region, and both of the sensing modules are installed adjacent to the middle region of the disc slot.
- [c7] 7. The optical disc drive of claim 1, wherein the roller rejects the disc when at least one of the sensing modules has sensed the disc and at least another one of the sensing modules does not sense the disc.
- [c8] 8. The optical disc drive of claim 1 further comprising an alarm for generating a warning signal when at least one of the sensing modules has sensed the disc and at least another one of the sensing modules does not sense the disc.

- [c9] 9. The optical disc drive of claim 8, wherein the alarm is a light-emitting diode (LED).
- [c10] 10. A method for controlling a roller to convey a disc inserted into a disc slot of an optical disc drive comprising a disc-position sensing device comprising a plurality of sensing modules, and the method comprising:
receiving the disc at the disc slot; and
controlling the roller to convey the disc when all of the sensing modules of the disc-position sensing device have sensed the disc.
- [c11] 11. The method of claim 10, wherein the disc-position sensing device comprises two sensing modules.
- [c12] 12. The method of claim 11, wherein either of the sensing modules comprises a light source for emitting light and a light sensor for sensing the light emitted from the light source, and the roller does not convey the disc until both of the light sensors do not sense the light from their corresponding light sources.
- [c13] 13. The method of claim 11, wherein the sensing modules are installed to have a distance between them corresponding to a size of the disc, so that either of the sensing modules can sense the disc if the disc is inserted into a middle region of the disc slot.

- [c14] 14. The method of claim 11, wherein one of the sensing modules is installed on one side of the center of the disc slot, and the other one of the sensing modules is installed on the other side of the center of disc slot.
- [c15] 15. The method of claim 11, wherein the disc slot comprises a middle region, and both of the sensing modules are installed adjacent to the middle region of the disc slot.
- [c16] 16. The method of claim 10, wherein the roller rejects the disc when at least one of the sensing modules has sensed the disc and at least another one of the sensing modules does not sense the disc.
- [c17] 17. The method of claim 10 further comprising an alarm for generating a warning signal when at least one of the sensing modules has sensed the disc and at least another one of the sensing modules does not sense the disc.
- [c18] 18. The method of claim 17, wherein the alarm is a light-emitting diode (LED).